ANT-190-XXX

Low-Profile GPS Through Hole Antenna

Applications

- Navigation
- Automatic Vehicle Location (AVL)
- Autonomous Vehicles
- Mobile Robots
- Drones
- Boats

Product Features

- Low Profile GPS Puck Antenna
- Permanent Mount
- SMA Connector
- Narrowband L1 Filter
- 28 dB Low Noise Amplifier
- Weatherproof – IP67 Rated
- TAA Compliant – Made in Taiwan

Ordering Information

Part No.	Description
ANT-190-005	Screw Mount GPS Antenna – Right Angle SMA Male on 18 inch Coax
ANT-190-010	Screw Mount GPS Antenna – SMA Male on 3 ft Coax
ANT-190-020	Screw Mount GPS Antenna – SMA Male on 6 ft Coax

General Description

Proxicast's low-profile active GPS L1 screw mount antenna is designed for use in fleet management, automatic vehicle location (AVL), position tracking for autonomous farm equipment, robots and drones, precision timing, mobile video and recreational navigation applications that require peak gain in a compact, vandal resistant form factor.

This antenna is ideally suited for vehicular GPS-enabled modems/routers and dedicated GPS receivers. The antenna can be used with passive or active GPS equipment via its integrated 28 dB low noise amplifier (LNA) which is compatible with 3~5V DC GPS receivers.

The antenna permanently mounts via a 1/2 in (12 mm) hole with internal nut. Low-loss RG174 coax is fed through center mounting post and pre-terminated with an SMA Male connector. A rubber boot creates an IP67 water-tight seal. This vandal-resistant antenna is not removable from outside and there is no exposed coax cable once installed.

This antenna's color, coax lead length and connector type can be customized – minimum order quantities apply.

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Operation of this device outside the parameter ranges given below may cause permanent damage.

Electrical Specifications

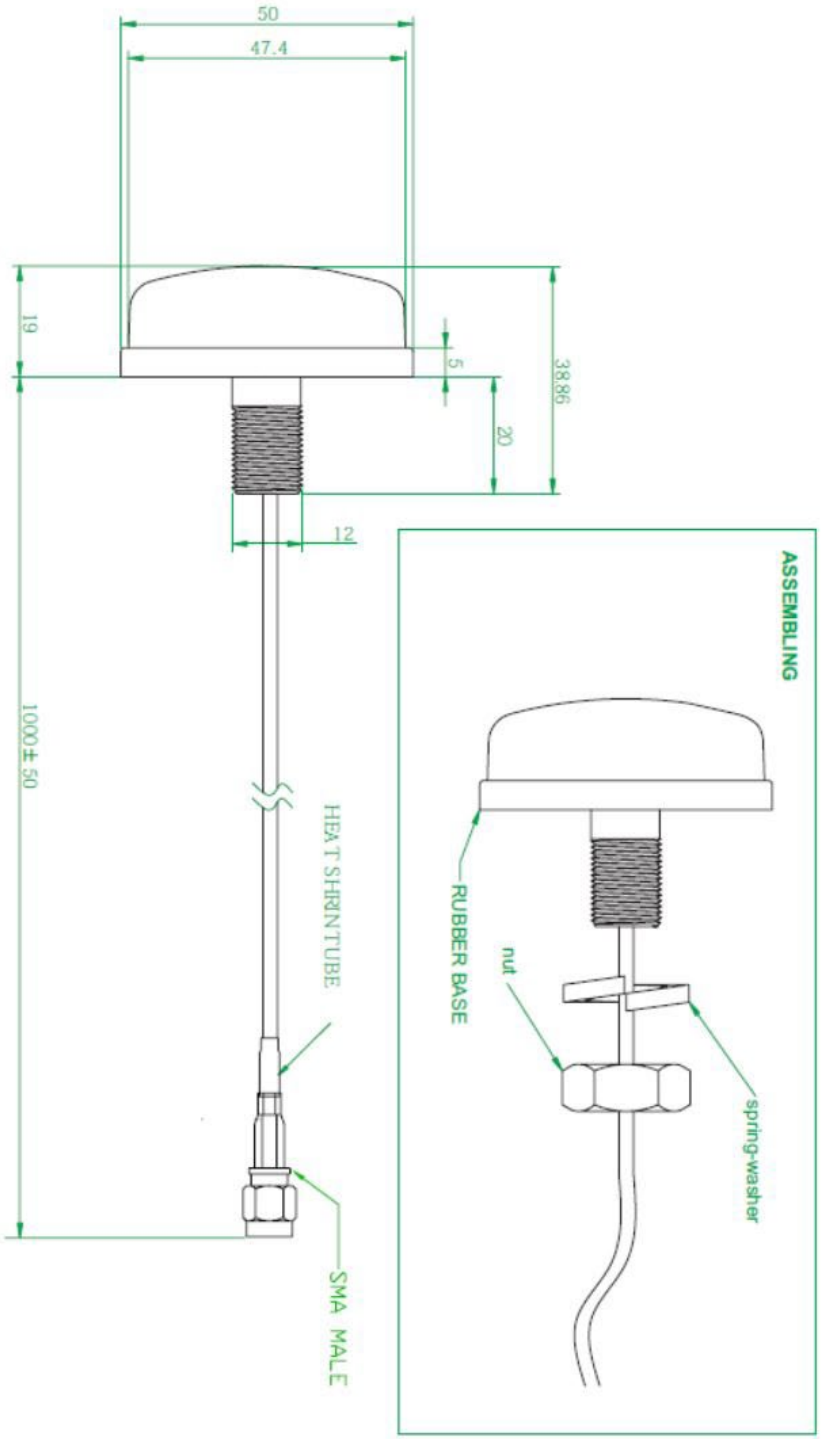
Parameter	Rating
Center Frequency	1575.42 ± 1.023 MHz (L1 band)
LNA Gain	28 ±4.5 dB Typical
Passive Gain	5 dBic typical @ Zenith -5 dBic max at 20° Elevation
Minimum Ground Plane	2.4 x 2.4 inches (60 mm x 60 mm)
Axial Ratio	3 dB (max @ 90°)
VSWR	≤ 2.0:1
Impedance	50 Ohm
Polarization	RHCP
Noise Figure	1.5 dB Max. (+25° C ± 5° C) 2.2 dB Max. (+85° C)
LNA Supply Voltage	3 - 5.0 VDC
Current Consumption	13~22 mA
Ex-Band Attenuation	fo = 1575.42 MHz fo ± 20 MHz 7dB MIN fo ± 30 MHz 12dB MIN fo ± 50 MHz 20dB MIN fo ± 100 MHz 30dB MIN

Mechanical Specifications

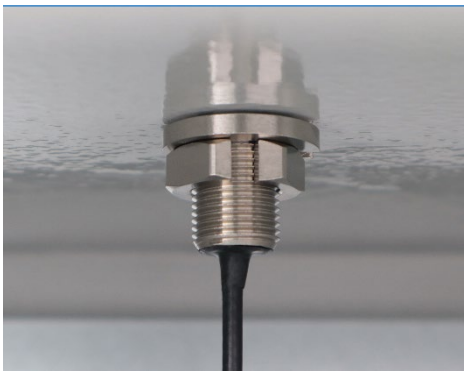
Parameter	Rating
Connector Type	SMA Male (plug) Right-Angle SMA Male standard on ANT-190-005
Coax Cable	RG174 low-loss coax: 18 in (0.5 m), 3 ft (1 m) or 6 ft (2 m)
Materials	ABS / Brass / Steel / Copper / Rubber / RoHS compliant
Dimensions	2.0 x 0.75 in (50 x 19 mm) when mounted
Weight	3.1 oz (88 g)
Antenna Color	Black
Operating Temperature	-30°C to +80°C
Environmental Rating	IP67 (waterproof)

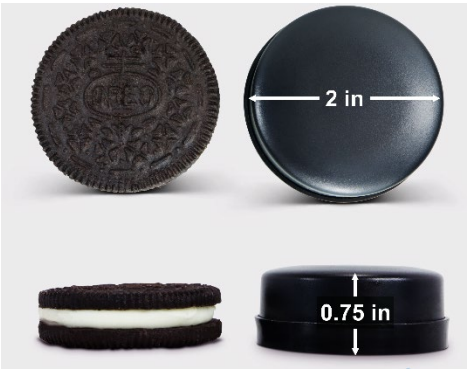
Mechanical Dimensions

Dimensions in millimeters



Product Images





Installation Instructions

- Drill a 0.5” (12 mm) hole in flat horizontal metal surface
- Remove mounting nut & washer and feed coax cables through hole
- Press antenna into hole and tighten nut & washer from underneath
- Optionally apply a thin bead of silicone caulk around the antenna rim

Contact Information

For the latest specifications, additional product information, worldwide sales and information about Proxicast:

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